

438-2661

# OWNER'S MANUAL

ATTACHING INSTRUCTIONS  
PARTS LIST

**Cub-53-A, Cub-53-B, Cub-53-C  
and Cub-54-A**

**Fertilizer Attachments**

for use with

**Cub-170 Combination Planter,  
Cub-171 Blackland Planter, Cub-172 Runner Planter**

and

**Cub-144 Cultivator (Side Dressing)**

This manual contains information which will be valuable to you during the entire life of your equipment. Rely on your manual for operating and maintenance information and rely on your International Harvester dealer when in need of skilled mechanical service or IH parts.

**INTERNATIONAL HARVESTER COMPANY**

180 NORTH MICHIGAN AVE.

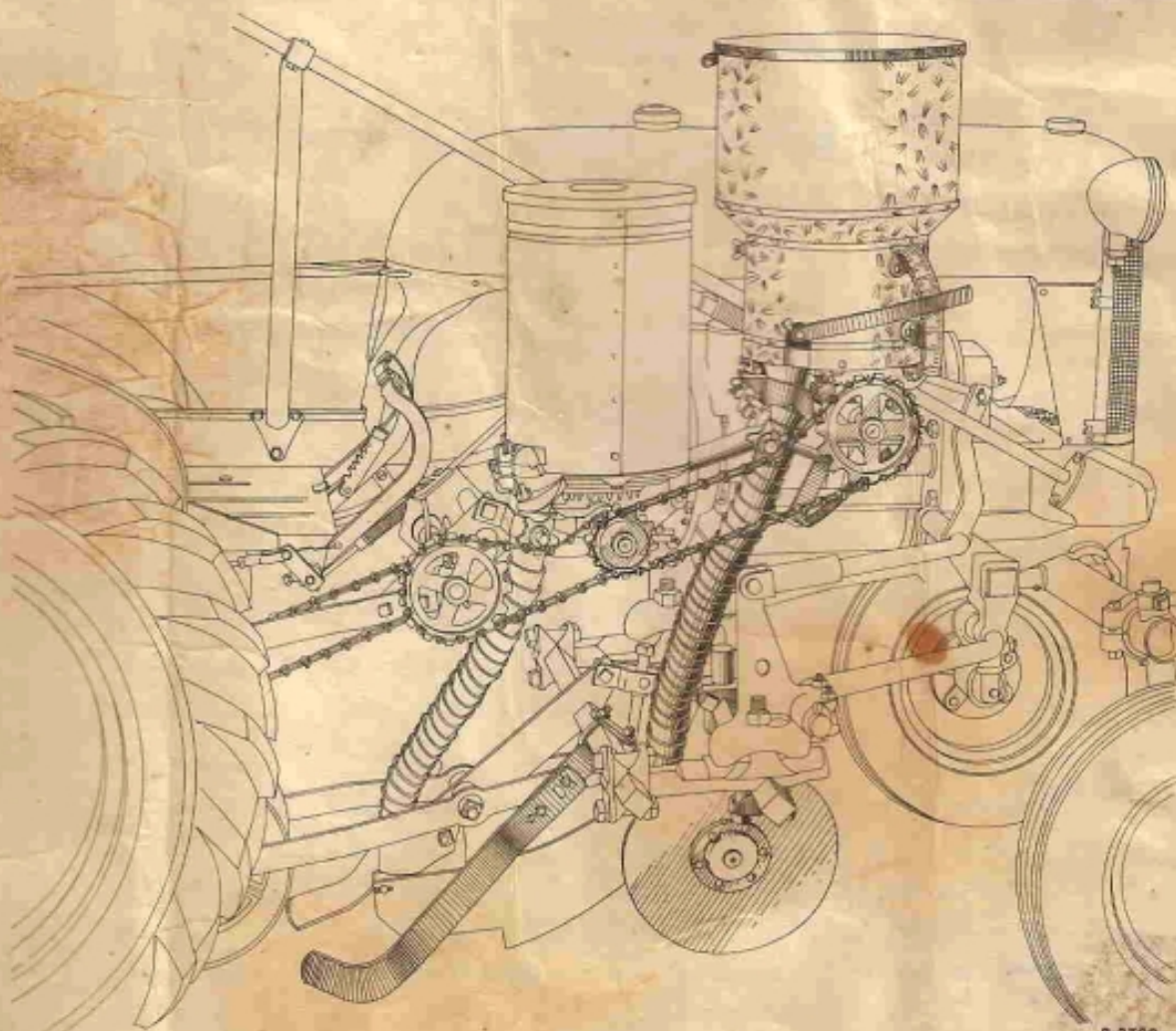
CHICAGO 1, ILLINOIS, U.S.A.



## TO THE OWNER

The fertilizer attachments covered in this manual are for use with various one-row Cub Planters and Cultivators for distributing commercial fertilizer beside the seed row while planting or beside the crop row while cultivating.

The hopper is the star feed type with a fingered feed wheel which revolves in the hopper bottom carrying the fertilizer under an adjustable gate to the discharge opening. The capacity of the hopper is approximately 65 pounds of average commercial fertilizer. The quantity of fertilizer distributed is regulated by a lever outside the hopper which controls the gate opening. A feed wheel for average delivery is furnished with the hopper. Two extra feed wheels are available from your dealer, one to increase the flow and the other to decrease it. With the three feed wheels, it is possible to apply from 60 to 900 pounds of fertilizer per acre.



Illustr. 1

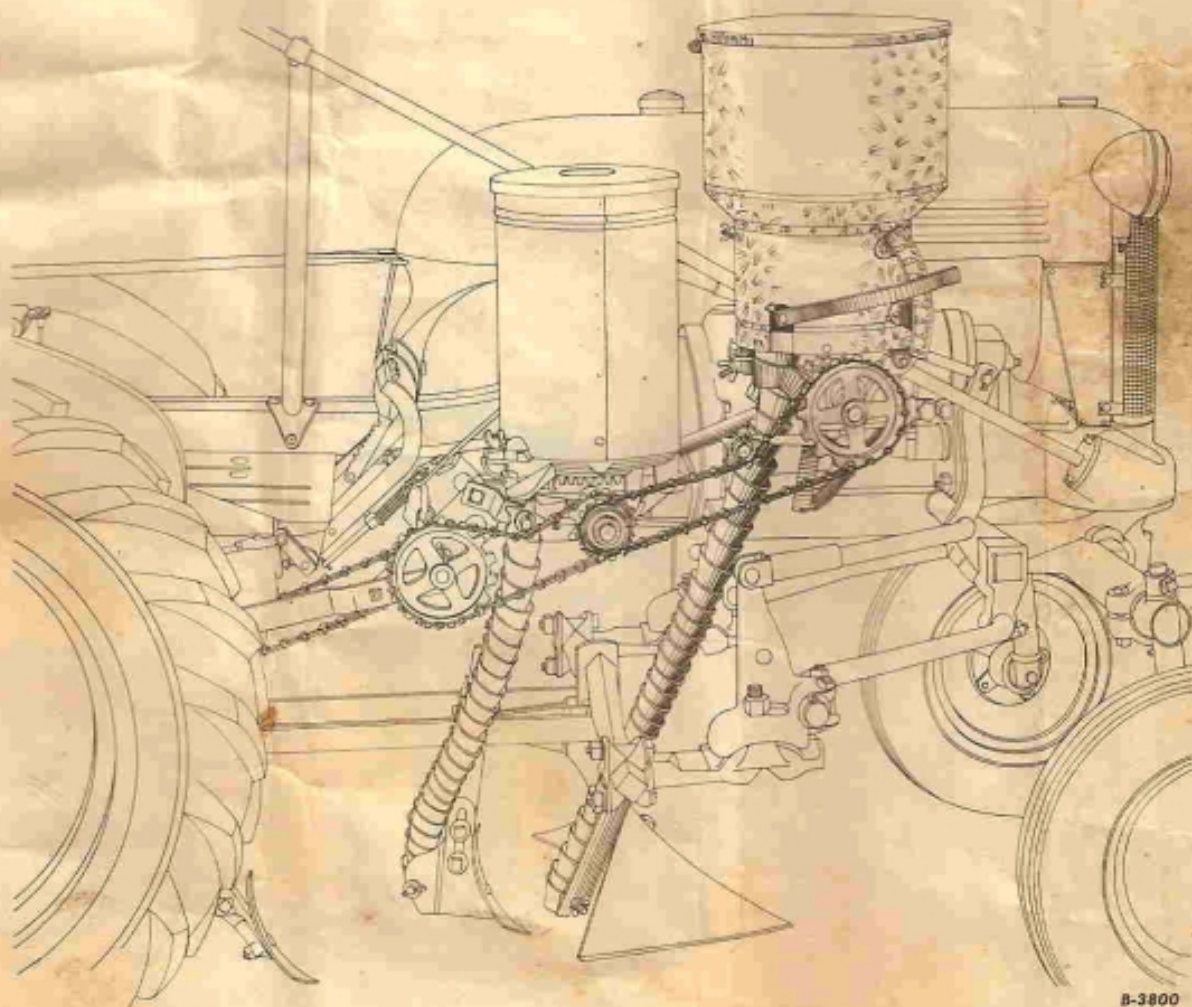
Cub-53-A Fertilizer Attachment shown with the Cub-172 Runner Planter.



The Cub-53-A Fertilizer Attachment is for use with the Cub-172 Runner Planter. As regularly equipped, the fertilizer is put down behind the opener disk which runs in front of the runner, about 2" to one side of the row and slightly lower than the seed. A covering blade is provided to fill in the fertilizer trench. The Deep Applicator Attachment may be obtained on special order for use instead of the disk opener.

The Cub-53-B Fertilizer Attachment is for use with the Cub-171 Blackland Planter (sweep type). The fertilizer is put down behind the sweep where it is mixed with the soil by the action of the opener and covering shovels.

The Cub-53-C Fertilizer Attachment is for use with the Cub-144 Cotton and Corn Cultivator for side dressing. It consists mainly of the counter-shaft assembly and delivery assembly. As regularly equipped, the flow of fertilizer is directed back of the sweep running next to the row. The Deep Applicator Attachment may be obtained on special order. This attachment places the fertilizer accurately and deep enough to prevent blowing.



Illustr. 2

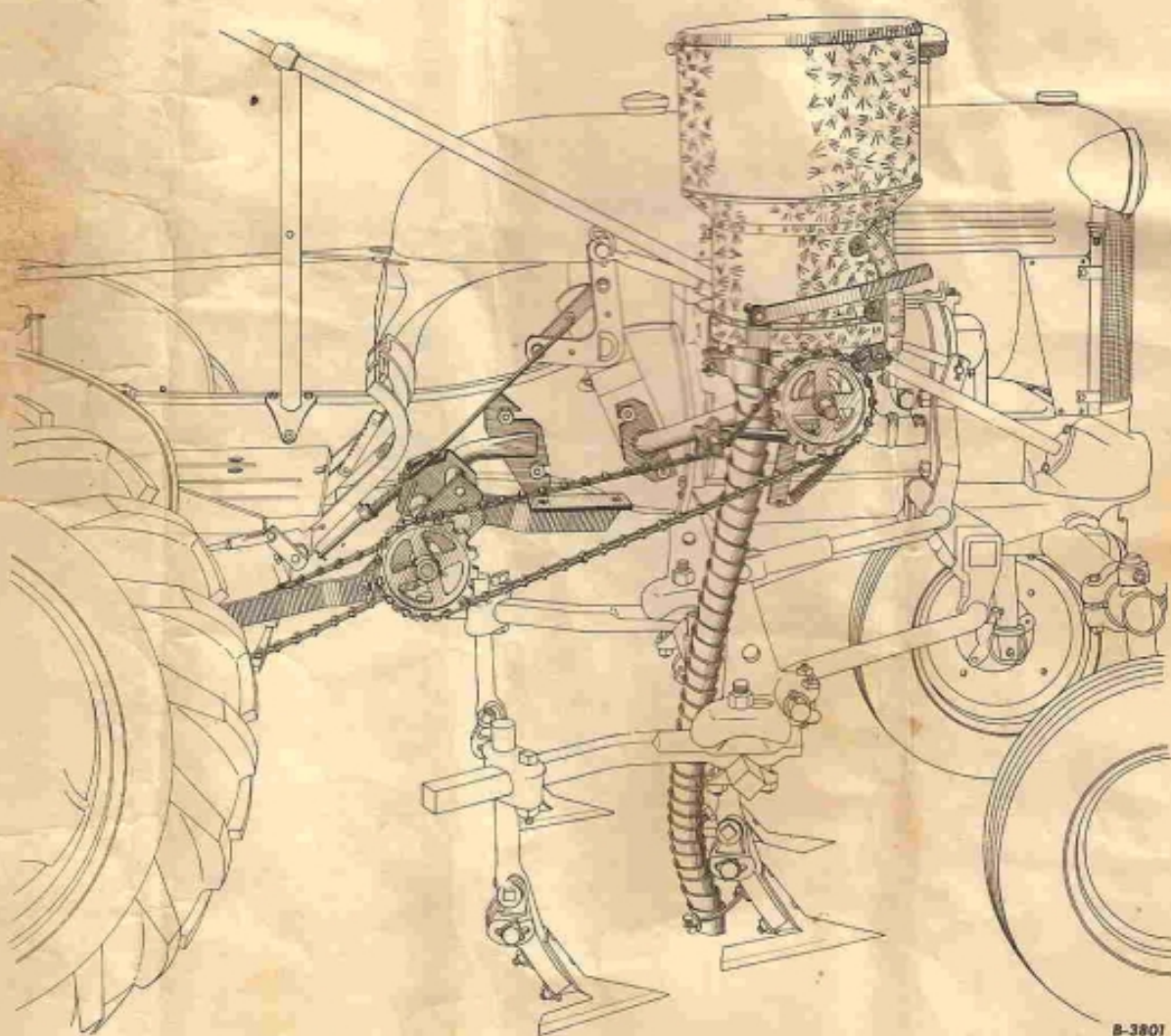
Cub-53-B Fertilizer Attachment shown with the Cub-171 Blackland Planter.



The countershaft assembly includes the parts necessary to drive the seed hoppers used with the Cub-170, Cub-171 and Cub-172 Direct-Connected Planters. A mounting plate on the countershaft frame provides a ready means of attaching the seed delivery parts. This results in a saving to the owner operating both planter and fertilizer attachment.

The delivery assembly includes the hopper and mounting bracket which may be used for fertilizing beside the seed row when using one of the planters mentioned above. A few extra parts are required when this is done.

The Cub-54-A Fertilizer Attachment is for use with the Cub-170 Combination Planter. The fertilizer and planter are designed to assure accurate placement of seed and fertilizer. The fertilizer is placed 2" to one side and from the same depth to 2-1/2" deeper than the seed. Curving rows may be planted with assurance that the fertilizer and seed will not become mixed.



Illustr. 3

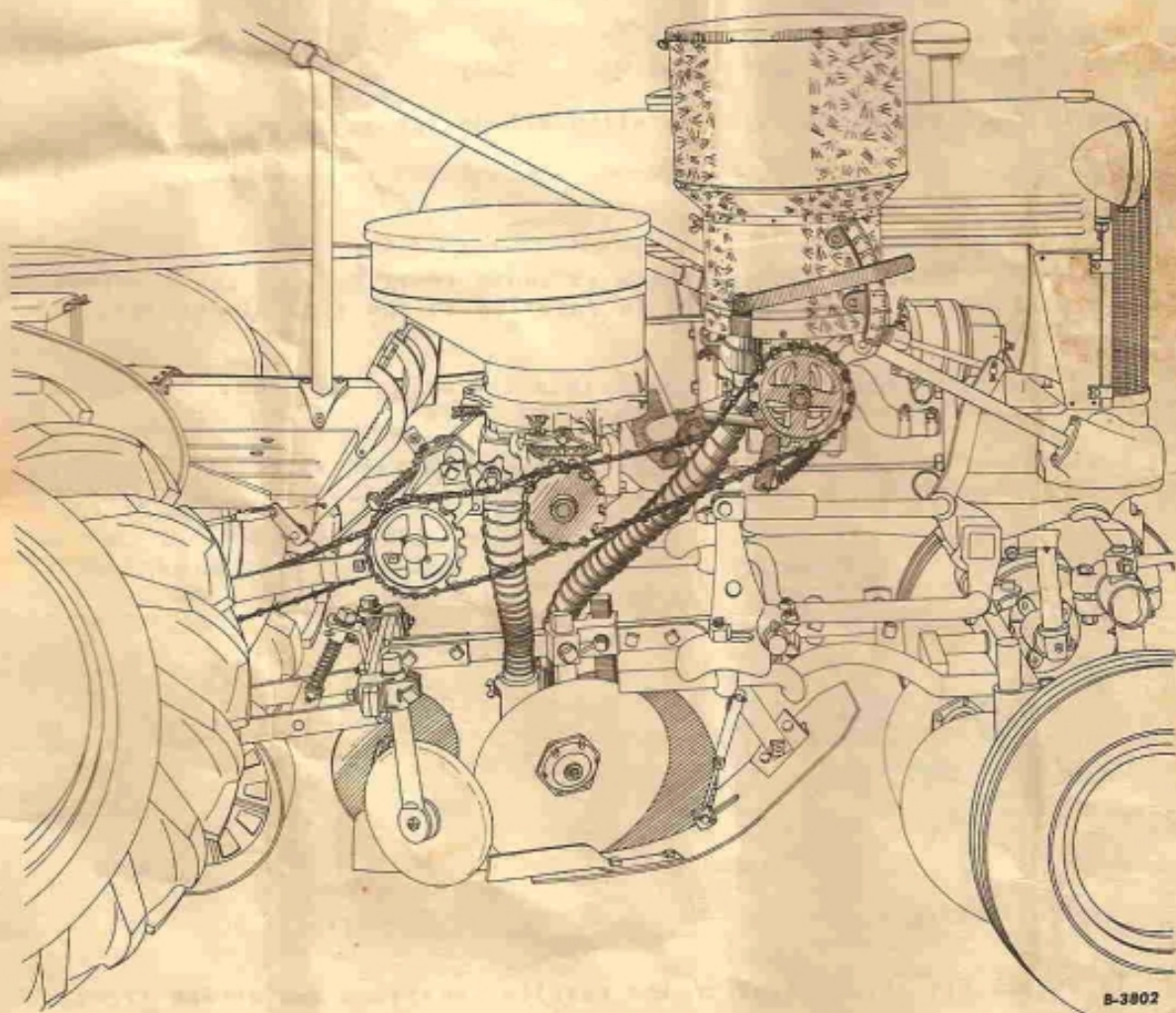
Cub-53-C Fertilizer Attachment shown with the Cub-144 Cultivator.



Fertilizer attachments purchased for use with planters may be used for side dressing with the cultivator by removing the seed hopper and attaching the tube to the sweep running next to the row or to the Deep Applicator Attachment.

You are urged to consult your International Harvester dealer concerning unusual field conditions or special crops. Within the International Harvester Company are men who have spent years in research and study of these things. Let the experience of these men serve you.

Be sure to read the instructions for Adjusting and Operating in this manual. Check each item referred to and acquaint yourself with the adjustments required to do a good job and to get maximum trouble-free service from your attachment.



Illustr. 4

Cub-54-A Fertilizer Attachment shown with the Cub-170 Combination Planter.



# INSTRUCTIONS FOR ADJUSTING AND OPERATING

(Setting Up Instructions are on page 9)

## LUBRICATION

Use the pressure lubricating gun furnished with the tractor and lubricate the following places **twice daily** when in use:

- Two fittings in hopper shaft bearings.
- Two fittings in countershaft bearings.
- One fitting in countershaft clutch.
- Two fittings in chain tightener sprockets.

**HOPPER MECHANISM:** Use kerosene or paraffin oil to cut the paint on the hopper mechanism so the parts will work freely.

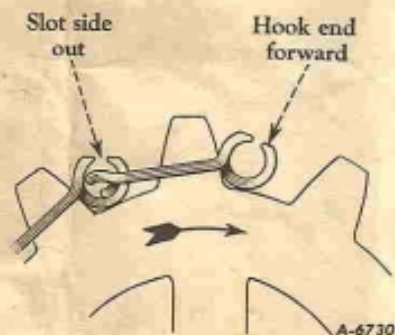
Use nothing but kerosene or paraffin oil on the interior mechanism.

## CHAINS

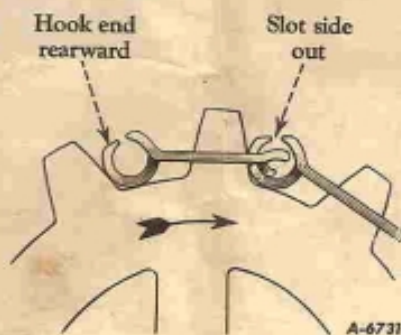
Place the chains on the sprockets as shown in *Illusts. 5 and 6* according to the size of the drive sprocket in relation to the size of the sprocket to be driven.

When the drive sprocket is larger than the driven sprocket, the chain should be placed on the sprockets as shown in *Illust. 5*.

When the drive sprocket is smaller than the driven sprocket, the chain should be placed on the sprockets as shown in *Illust. 6*.



*Illust. 5*



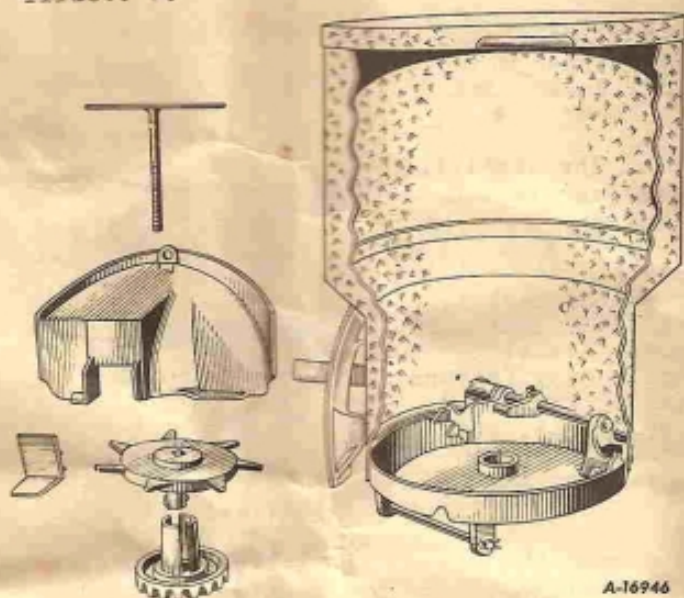
*Illust. 6*

To detach the chain, bend to the coupling position and strike light blows.

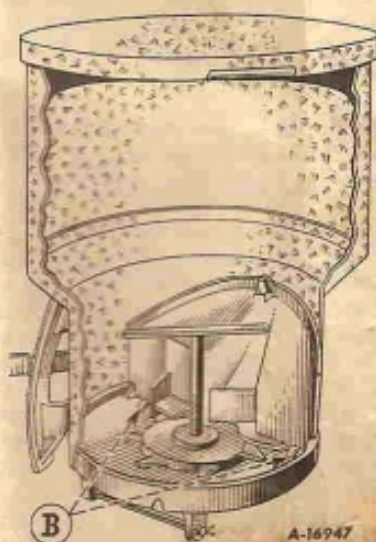


## CLEANING THE FERTILIZER HOPPERS

As most fertilizer becomes set and hard when left standing, it is necessary to empty the hoppers and clean the feeding mechanism frequently. All working parts in the hopper are easily removed for cleaning. See *Illust. 7*.

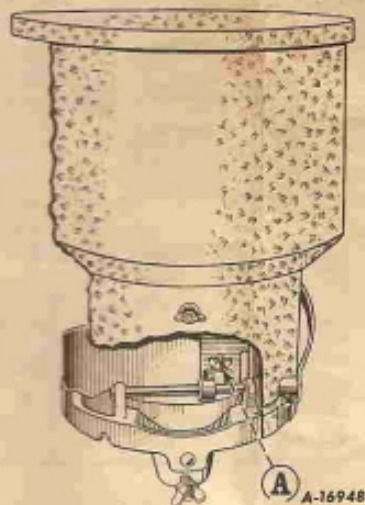


*Illust. 7*  
Fertilizer hopper cut away to show the inside of hopper and the parts removed for cleaning.



*Illust. 8*  
Fertilizer hopper cut away to show the inside of hopper with the parts in working position.

**CAUTION:** When replacing the back plate in the hopper it is important that the lugs on the fertilizer gate fit over the raising arm on the gate rod, as at "A" in *Illust. 9*. It is also important that the bottom of the back plate rests behind the lugs on the fertilizer hopper bottom as at "B" in *Illust. 8*.



*Illust. 9*  
Fertilizer hopper cut away showing assembly behind back plate.

**IMPORTANT!** Never leave fertilizer in the hopper over night. Many kinds of commercial fertilizer will cement the parts together so tightly in a few hours that it is extremely hard to get the feeds loose again.



## SOWING FERTILIZER

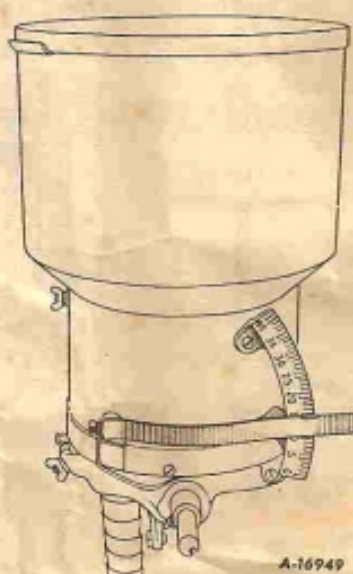
Fertilizer must be free from all hard substances such as stones, iron or other foreign matter, as they are liable to break the feeding device.

The quantity of fertilizer sown is regulated by the lever on the outside of the hopper which engages the notches in the quantity rack. See *Illust. 10*.

**CAUTION!** Do not attempt to push the quantity lever below Notch No. 5 with fertilizer in the hopper unless the machine is in motion.

Owing to the fact that there is a great variety of commercial fertilizer on the market, it is impossible to make a sowing table that would indicate with any accuracy the actual amount of fertilizer sown per acre. Many factors can affect the accuracy of any table; for example, dry or damp material, fine or coarse, etc. However, a table of approximate quantities sown is given for use as a guide when setting the quantity lever.

The sowing table below is based upon the use of dry, free-running commercial fertilizer weighing a little over 3 pounds per quart. All quantities given are approximate.



*Illust. 10*

Fertilizer Quantity  
lever.

## FERTILIZER SOWING TABLE

Pounds per Acre -- 42" Rows			
Using Feed Wheel			
Number of Notch	NB 2554 (Special)	NC 316 (Regular)	NC 115 (Special)
0	56	140	300
5	87	150	330
10	193	200	400
15	306	300	490
20	...	375	600
25	...	460	690
30	...	550	790
35	...	630	880
40	...	680	940

**NOTE:** With NB 2554 feed wheel, do not use quantity lever beyond Notch 15.

**NOTE:** The quantity of fertilizer sown at a given setting can be checked by determining the amount of fertilizer used in the forward travel required for one acre. For a one-row machine set for 42" rows (42" strip), the forward travel required for one acre is 754 rods.

For row spacings other than 42", the quantity is proportionately larger for narrower spacing and proportionately smaller for wider spacing.

When through using the fertilizer attachment for the season, clean it thoroughly, including the tubes and the fertilizer boots, and oil with kerosene.

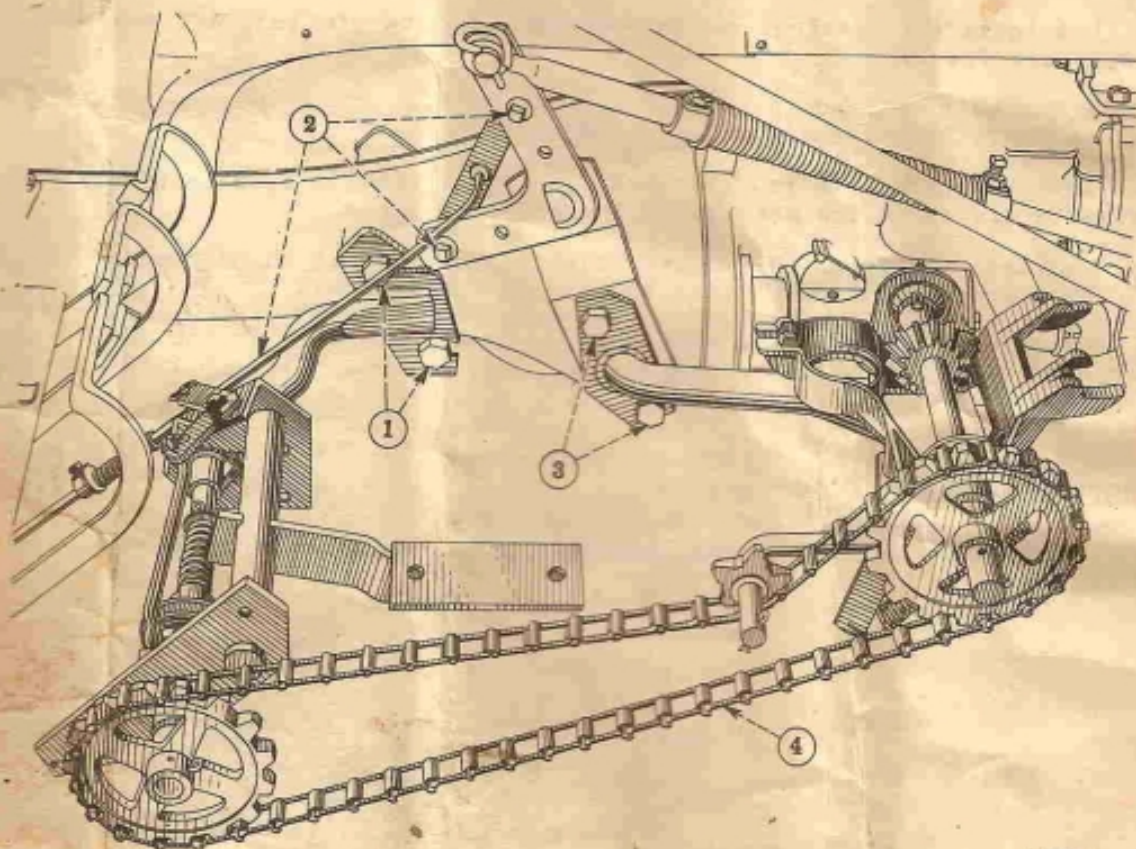


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# COUNTERSHAFT AND HOPPER SUPPORT

(Cub-53-C Fertilizer Attachment for Side Dressing with Cultivator)



A-16878

Illustr. 12

Note that the fertilizer feed shaft driven sprocket is set inward and pinned to the second hole in the shaft to line up with the countershaft drive sprocket.

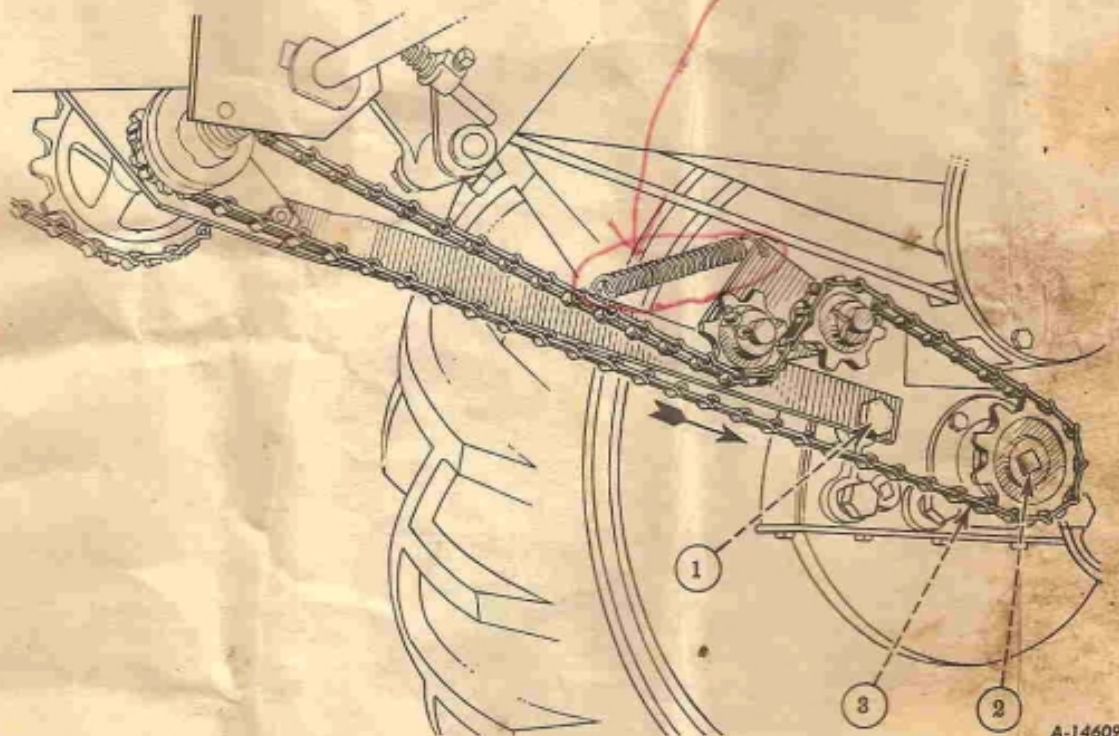
1. Attach the countershaft frame to the rear mounting pad on the right side of the tractor, using the two conical head attaching screws.
2. Bolt the throw-out rod adapter to the rockshaft arms and connect the throw-out rod as shown.
3. Attach the hopper support to the front mounting pad on the side of the tractor as shown.
4. Put on the drive chain. See "CHAINS" in the Instructions for Adjusting and Operating.



## COUNTERSHAFT DRIVE

(Cub-53-C Fertilizer Attachment for Side Dressing with Cultivator)

ON PAGE 18  
MAIN DRIVE  
SPRING



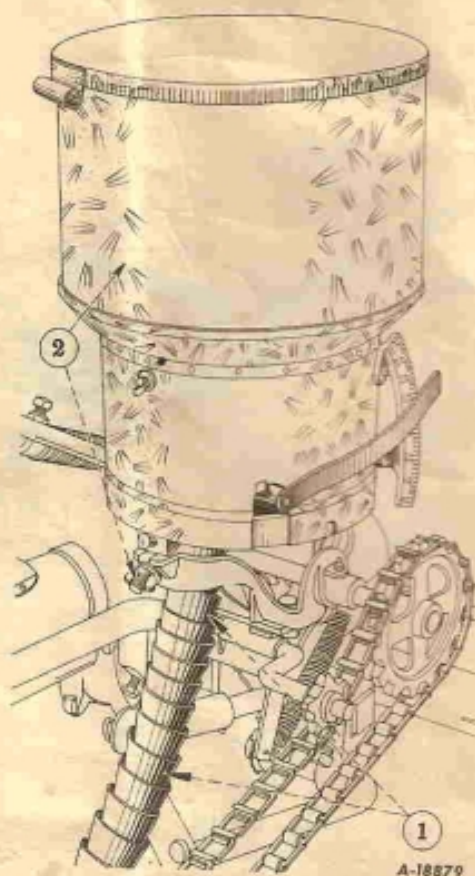
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Illustr. 13

1. Bolt the countershaft brace to the countershaft frame and to the rear axle housing with the conical head attaching screw.
2. Attach the seed plate drive sprocket to the tractor drive spindle with the machine bolt furnished.
3. Put on the main drive chains. Also see "CHAINS" in the Instructions for Adjusting and Operating.



## HOPPER AND DELIVERY TUBE



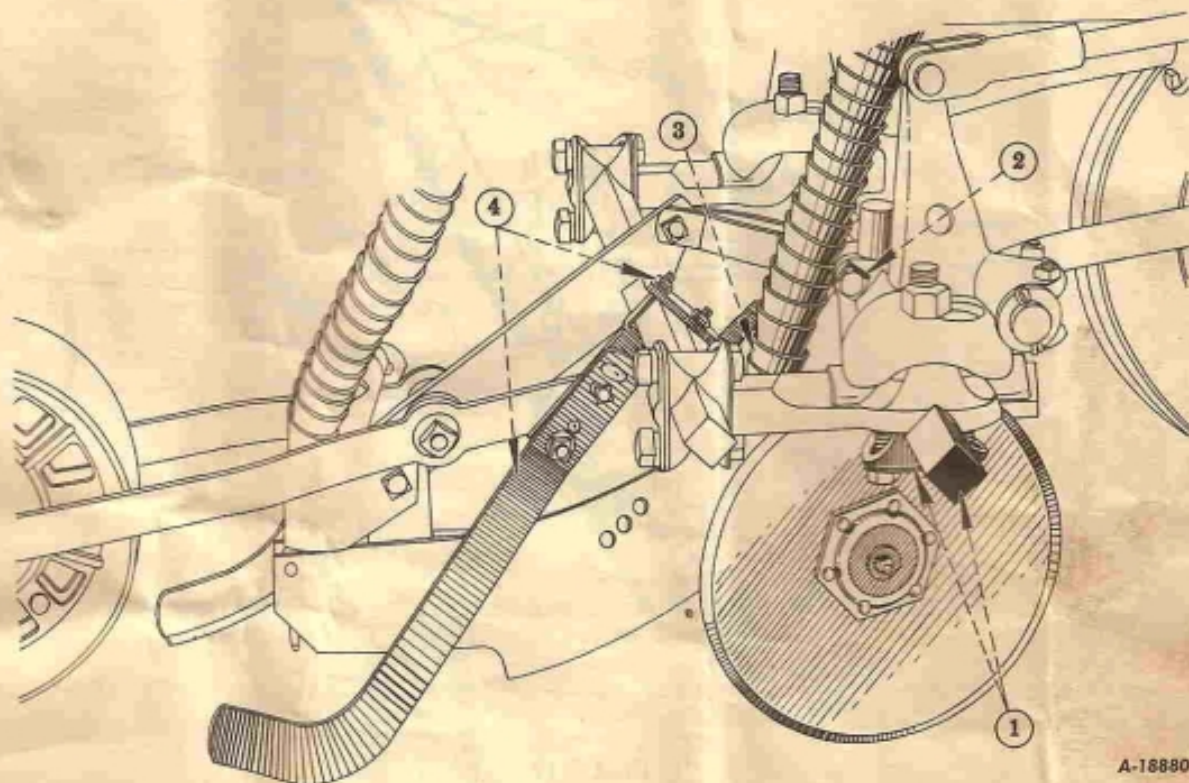
Illustr. 14

1. Run the delivery tube down through the opening "C" (Illustr. 11) in the hopper bracket so the tube is supported by the flange at the end.
2. Set the hopper on the support and secure it in place with the wing nut.



**DISK OPENER**

(Cub-53-A Fertilizer Attachment for Cub-172 Runner Planter)



A-18880

Illustr. 15

1. Detach the ground unit from the mounting frame, remove the two short bolts holding the leveling shims on the right tool bar extension. Replace these bolts with the longer ones furnished, install the clamp cap and clamp the disk standard extension in place. Reattach the ground unit to the mounting frame.

2. Clamp the disk opener to the extension.

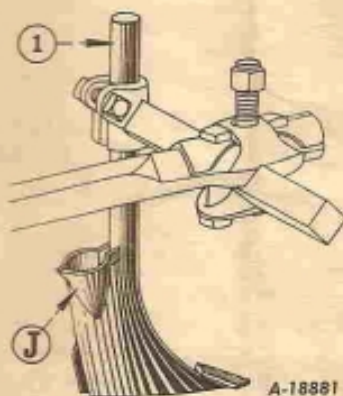
3. Attach the delivery tube to the opener boot.

4. Clamp the covering blade to the tool bar.

**DEEP APPLICATOR ATTACHMENT (514 302 R91)**  
**(Special)**

(Cub-53-A Fertilizer Attachment for Cub-172 Runner Planter)

1. Clamp the deep applicator to the tool extension and attach the fertilizer tube to the boot "J" in the same manner as described and illustrated above for the disk opener.



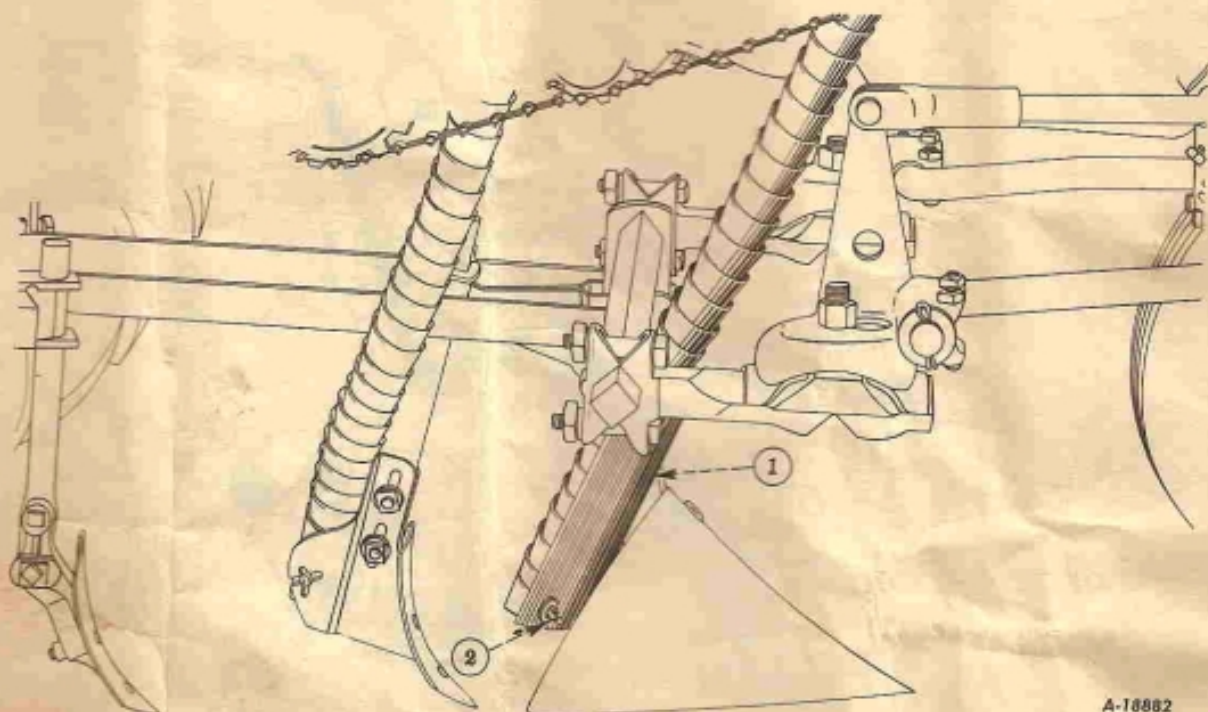
A-18881

Illustr. 16



# DELIVERY TUBE GUARD

(Cub-53-B Fertilizer Attachment for Cub-171 Blackland Planter)



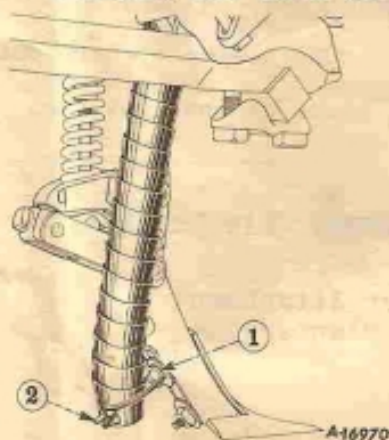
A-18882

Illustr. 17

1. Bolt the tube guard to the lower standard.
2. Attach the delivery tube to the guard.

# DELIVERY TUBE CONNECTION

(Cub-53-C Fertilizer Attachment for Side Dressing with Cultivator)



Illustr. 18

1. Attach the tube connection wire to the sweep bolt.
2. Attach the lower end of the tube to the wire and tighten the wing nut.



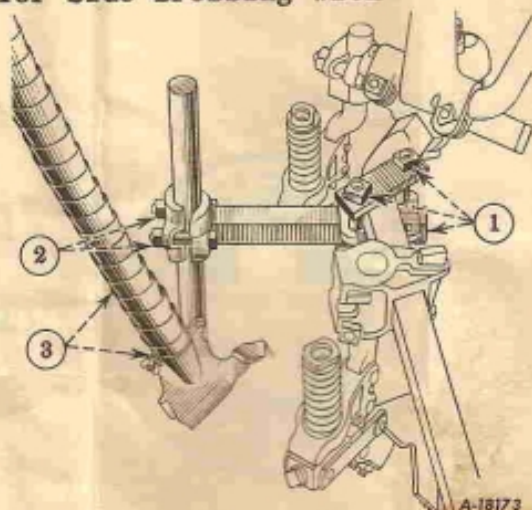
## DEEP APPLICATOR ATTACHMENT (514 303 R91) (Special)

### (Cub-53-C Fertilizer Attachment for Side Dressing with Cultivator)

1. Clamp the tool bar extension to the outside tool bar. Leave the nuts loose.

2. Clamp the deep applicator shank to the tool bar extension. Adjust the shank and the tool bar extension to place the fertilizer in relation to the row as desired. Tighten all nuts securely to hold the adjustment.

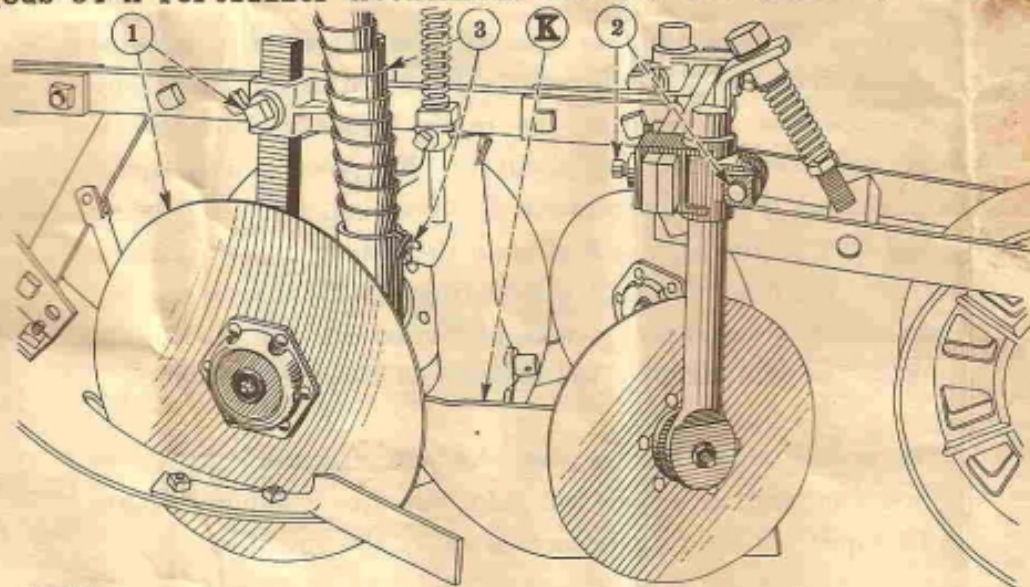
3. Connect the fertilizer tube and tighten the wing nut.



Illustr. 19

## DISK OPENER AND COVERING DISK

### (Cub-54-A Fertilizer Attachment for Cub-170 Planter)



Illustr. 20

1. Slide the disk opener shank up into the clamp, adjust it to place the fertilizer at the desired depth and tighten the set screw securely.

2. Clamp the covering disk to the frame to give the desired amount of coverage of the fertilizer trench.

3. Attach the delivery tube to the boot by means of the wing nut.

**IMPORTANT!** The separator blade "K" on the seed boot is finished with a high polish to aid scouring and is painted to prevent rust. Good work cannot be accomplished unless the paint is removed from the blade.

**PAINT REMOVER:** The recommended method is to apply a regular prepared paint remover which can be obtained from almost any store handling a line of paints.





## Farm Accidents can be prevented with your help

No accident-prevention program can be successful without the whole-hearted co-operation of the person who is directly responsible for the operation of equipment.

To read accident reports from all over the country is to be convinced that a large number of accidents can be prevented only by the operator anticipating the result before the accident is caused and doing something about it. No power-driven equipment, whether it be transportation or processing, whether it be on the highway, in the harvest field or in the industrial plant, can be safer than the man who is at the controls. If farm accidents are to be prevented—and they can be prevented—it will be done by the operators who accept a full measure of their responsibility.

It is true that the designer, the manufacturer, the safety engineer can help; and they will help, but their combined efforts can be wiped out by a single careless act of the operator.

It is said that *"the best kind of a safety device is a careful operator."* We ask you to be that kind of an operator.

NATIONAL SAFETY COUNCIL



## PARTS LISTS AND ILLUSTRATIONS

The following pages contain parts lists with "exploded" view illustrations of the various units disassembled so that parts wanted may be readily located. Reference numbers only are shown in the illustrations. To avoid errors and delays when ordering parts, always use the regular "Part Number" shown with the "Ref. No." Do not use reference numbers when ordering parts.

**WHEN THE PART NUMBER IS NOT KNOWN:** use the "Index to Units" below and refer to the illustration of the unit on which the part is used. The illustrations show reference numbers which appear in the accompanying reference list. The reference list contains the part number with a "noun first" or basic description.

**WHEN THE PART NUMBER IS KNOWN:** use the "Numerical Index" at the back of the manual. This index shows the page number on which the part is listed. The reference number, which is listed with the part number, may be used for referring to the illustration.

Do not order from the illustrations only: refer to the list also.

Attaching parts, such as bolts, cap screws, lock washers, nuts, cotter pins, etc., are listed beneath and indented from the part they attach. Attaching parts must be ordered separately as they are not furnished with the part they attach.

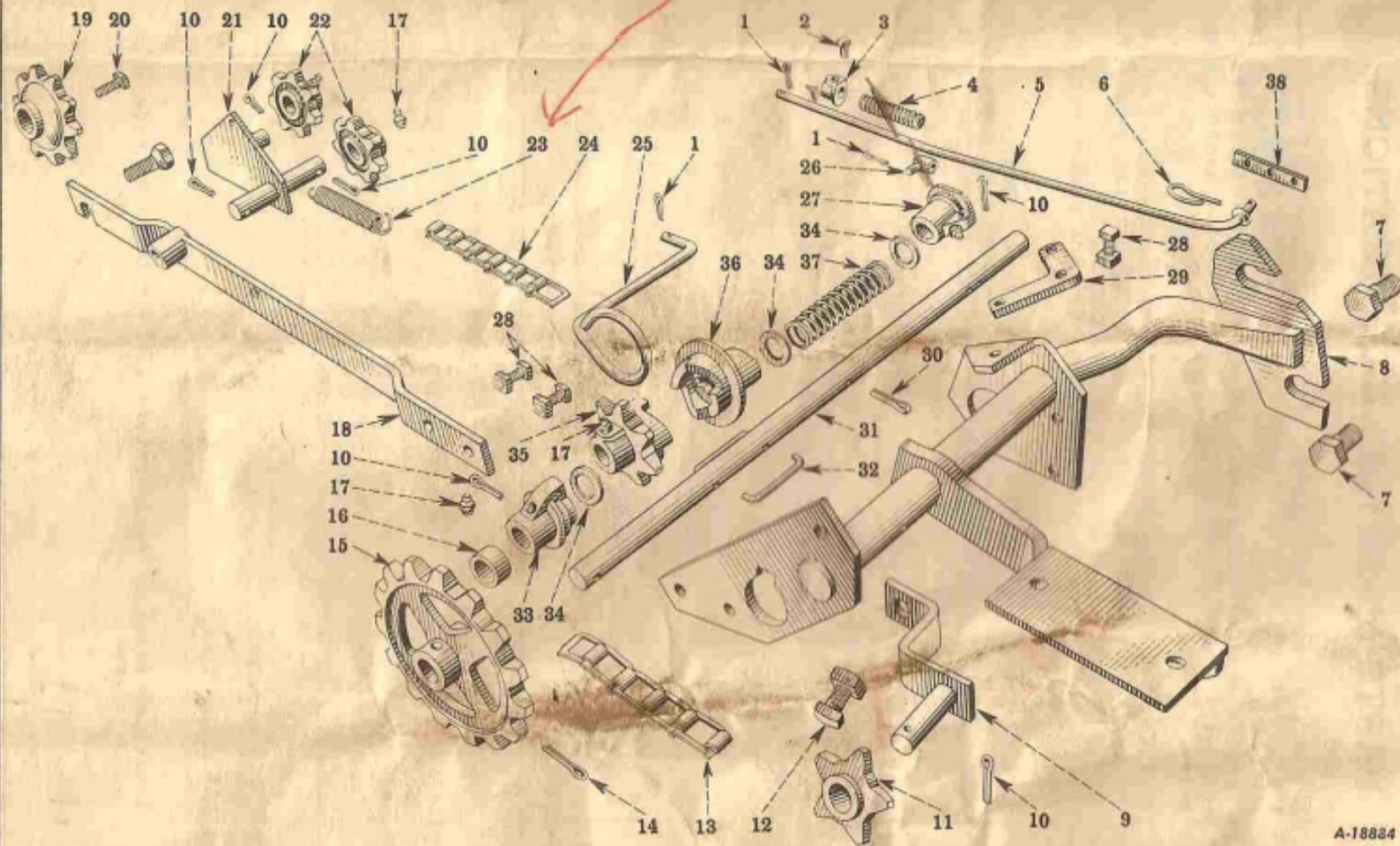
### INDEX TO UNITS

Description	Page
Countershaft. . . . .	18, 19
Covering Blade. . . . .	24
Deep Applicator Attachment (Special). . . . .	24, 25
Delivery Tube . . . . .	23 to 26
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Numerical Index to Part Numbers will be found on page 28.



COUNTERSHAFT  
(Cub-53-C Fertilizer Attachment for Side Dressing with  
Cultivator)



A-18884



Index to Reference Numbers shown in illustration on opposite page.

Ref. No.	Part Number	Description	Ref. No.	Part Number	Description
1	13 042 R1	Follows Ref. Nos. 5, 25 and 26.	19	512 210 R1	SPROCKET, seed plate drive (10 teeth).
2	102 881	Follows Ref. No. 3.	20	13 256 R11	BOLT, machine, 7/16-14NC x 1", w/NUT.
3	514 547 R1	COLLAR, set, throw-out rod, w/ SET SCREW.		103 322	WASHER, lock, 7/16".
	102 881	COLLAR, set, throw-out rod (order COLLAR, assembly, PO 2 593).	21	512 189 R91	TIGHTENER, main chain (welded assembly).
		SCREW, set, sq-hd., cup-pt., 5/16-18NC x 1 1/2".		13 068 R1	PIN, cotter, 3/16 x 1" (3 used).
4	11 100 D	SPRING, clutch throw-out rod (2-3/4" long, 5/8" OD, 13 coils).	22	PO 3 089	SPROCKET, idler, main drive chain (7 teeth).
5	512 347 R1	ROD, throw-out, clutch.	23	PO 16	SPRING, main chain tightener (3-7/16" long, 25/32" O.D., 26 coils).
6	512 353 R1	PIN, cotter, quick-attachable.	24	PO 10 349	CHAIN, main drive (62 links, No. 32 chain).
7	13 042 R1	PIN, cotter, 1/8 x 3/4".	25	512 348 R1	LINK, throw-out rod.
8	PO 25 842 A	Follows Ref. No. 8.		13 042 R1	PIN, cotter, 1/8 x 3/4".
	512 346 R92	FRAME, countershaft (welded assembly).	26	PO 2 437	SWIVEL, throw-out rod.
	PO 25 842 A	SCREW, cap, conical-hex-hd., 5/8-11NC x 1-1/4" (2 used).		13 042 R1	PIN, cotter, 1/8 x 3/4".
9	512 351 R91	TIGHTENER, hopper drive chain (welded assembly).	27	PO 2 677	BEARING, countershaft, left.
	13 257 R11	BOLT, machine, 1/2-13NC x 1", w/NUT.		13 068 R1	PIN, cotter, 3/16 x 1" (2 used).
10	13 068 R1	PIN, cotter, 3/16 x 1".	28	13 225 R11	Follows Ref. Nos. 18 and 29.
11	PO 2 859	SPROCKET, idler, hopper drive chain (5 teeth).	29	PO 27 788	BELL CRANK, throw-out rod.
12	13 257 R11	Follows Ref. No. 9.		13 255 R11	BOLT, machine, 3/8-16NC x 1", w/NUT.
13	23 946 A	CHAIN, drive, hopper (57 links, No. 32 chain).	30	13 069 R1	Follows Ref. No. 31.
14	13 138 R1	Follows Ref. No. 15.	31	512 352 R1	COUNTERSHAFT.
15	510 943 R1	SPROCKET, countershaft (16 teeth).		13 069 R1	PIN, cotter, 1/4 x 1".
	13 138 R1	PIN, cotter, 3/16 x 1-3/4".	Q	3 501	WASHER, plain, 25/32" I.D. x 1-1/4" O.D. x 16 ga. (3 used).
16	PO 15 880	SPACER, sprocket and countershaft right bearing.	32	PO 23 196	KEY, countershaft.
17	119 512	FITTING, lubrication, straight, 1/8".	33	PO 2 675	BEARING, countershaft, right.
18	512 202 R11	BRACE, countershaft frame (welded assembly).		13 068 R1	PIN, cotter, 3/16 x 1".
	13 255 R11	BOLT machine, 3/8-16NC x 1", w/NUT (2 used).	34	Q 3 501	Follows Ref. No. 31.
	351 679 R1	SCREW, cap, conical-hex-hd., 5/8-11NC x 1".	35	512 162 R1	SPROCKET, clutch (7 teeth).
			36	PO 1 933 A	CLUTCH, drive.
			37	PO 156	SPRING, throw-out clutch (4-1/2" long, 1-1/32" O.D., 16 coils).
			38	512 682 R1	ADAPTER, throw-out rod.
				13 254 R11	BOLT, machine, 5/16-18NC x 1", w/NUT (2 used).
			Q	399	WASHER, plain, 11/32" I.D. x 1" O.D. x 16 ga.

COUNTERSHAFT - Continued  
(Cub-53-C Fertilizer Attachment for Side Dressing with Cultivator)



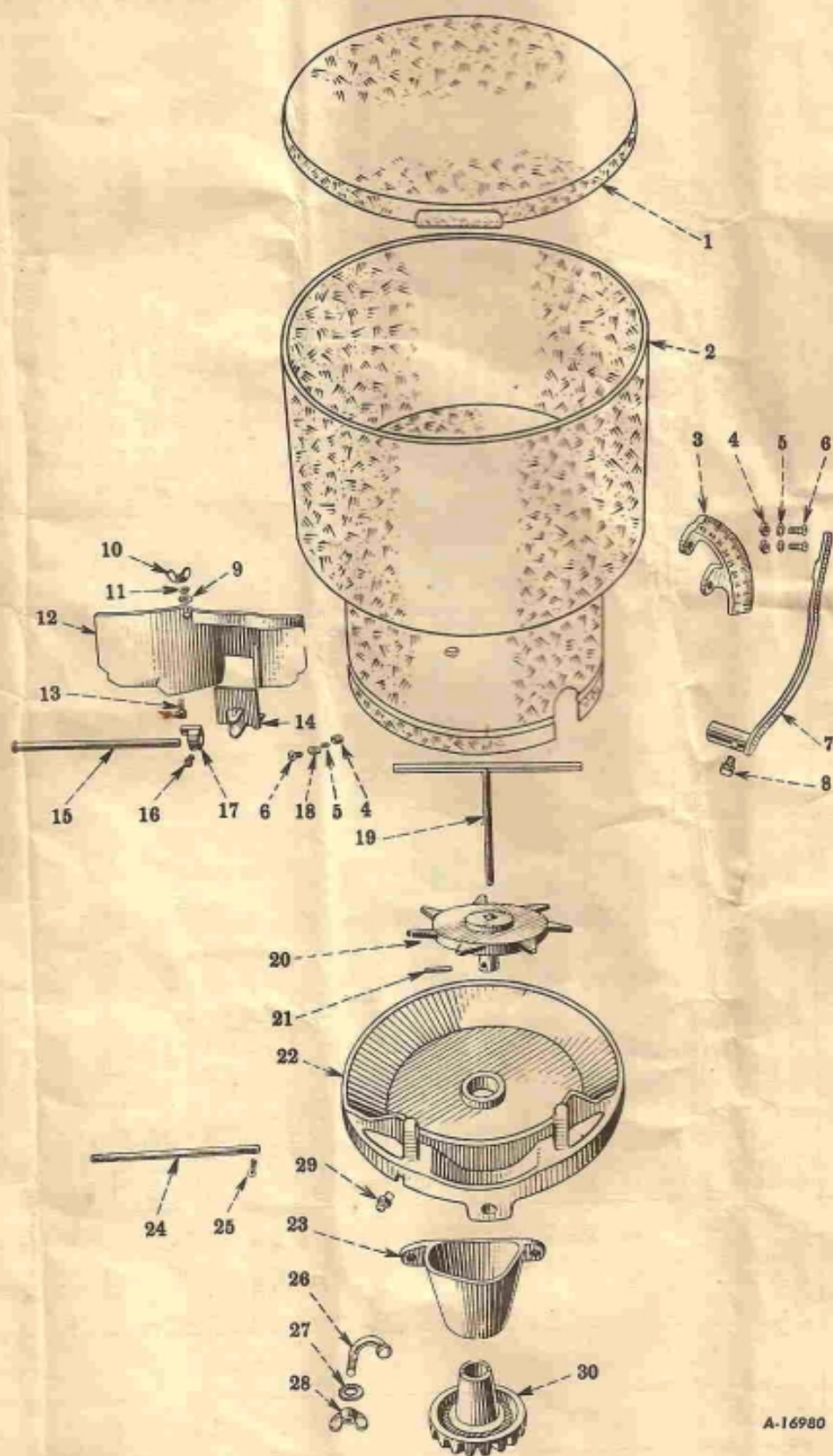
## HOPPER - Continued

Index to Reference Numbers shown in illustration on opposite page.

Ref. No.	Part Number	Description
1	620 122 R1	LID, hopper.
2	620 720 R91	HOPPER (welded assembly).
	113 956	SCREW, machine, slotted-rd-hd., 1/4-20NC x 5/8" (3 used).
	114 380	NUT, square, 1/4-20NC (3 used).
	103 319	WASHER, lock, 1/4" (3 used).
	103 339	WASHER, plain, 1/4" (3 used).
3	620 710 R1	PLATE, indicator.
4	114 380	NUT, square, 1/4-20NC (2 used).
5	103 319	WASHER, lock, 1/4" (2 used).
6	113 956	SCREW, machine, slotted-rd-hd., 1/4-20NC x 5/8" (2 used).
7	{ 620 717 R11	LEVER, quantity, w/SET SCREW.
	{ 620 717 R1	LEVER, quantity, (welded assembly) (order LEVER, assembly, 620 717 R11).
8	102 892	SCREW, set, sq-hd., cup-pt., 3/8-16NC x 1/2".
9	Q 243	Follows Ref. No. 12.
10	103 128	Follows Ref. No. 12.
11	103 320	Follows Ref. No. 12.
12	3 571 A	PLATE, back.
13	13 240 R11	BOLT, machine, 5/16-18NC x 5/8", w/NUT.
	103 128	NUT, wing, 5/16-18NC.
	103 320	WASHER, lock, 5/16".
	Q 243	WASHER, plain, 21/64" I.D. x 3/4" O.D. x 16 ga.
14	3 563 A	GATE.
15	33 571 A	ROD, gate.
16	102 881	Follows Ref. No. 17.
17	3 562 A	ARM, gate rod.
	102 881	SCREW, set, sq-jd., cup-pt., 5/16-18NC x 1/2".
18	103 339	Follows Ref. No. 2.
19	43 037 A	AGITATOR (welded assembly).
	NC 115	WHEEL, feed, w/PIN (maximum) (7 points).
20	NC 316	WHEEL, feed, w/PIN (medium) (7 points).
	NB 2 554	WHEEL, feed, w/PIN (minimum) (14 points).
21	N 62 414	PIN, hdls., 5/32 x 1-1/8".
22	3 570 AA	BOTTOM, hopper.
	Q 817	PIN, std-hd., 5/16 x 6".
	103 384	PIN, cotter, 1/8 x 3/4".
23	3 572 A	SPOUT.
	104 070	RIVET, rd-hd., 3/16 x 7/8" (2 used).
24	Q 817	Follows Ref. No. 22.
25	103 384	Follows Ref. No. 22.
26	33 573 A	BOLT, hold-down, hopper (std-hd., pin, 3/8-16NC x 2-7/8").
27	50 793 K	WASHER, plain, 13/32" I.D. x 7/8" O.D. x 11 ga.
28	103 129	NUT, wing, 3/8-16NC.
29	110 161	FITTING, lubrication, straight, drive fit, 3/16".
30	3 567 A	GEAR, bevel (18 teeth).



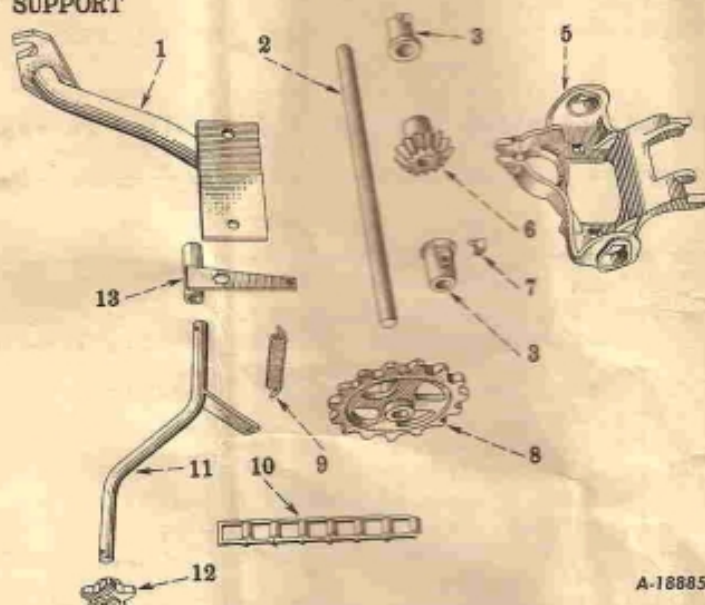
## HOPPER



A-16980



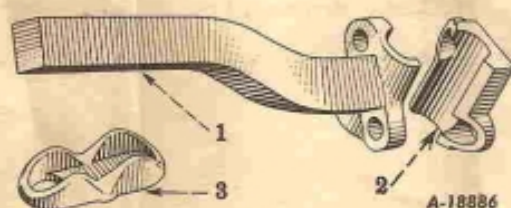
## HOPPER BRACKET SUPPORT



A-18885A

Ref. No.	Part Number	Description
1	514 002 R92	SUPPORT, hopper bracket (welded assembly).
PO	25 842 A	BOLT, conical-hex-hd., 5/8-11NC x 1-1/4" (2 used).
2	514 009 R1	SHAFT, feed.
Q	3 501	WASHER, plain, 25/32" I.D. x 1-1/4" O.D. x 16 ga. (2 used).
	13 095 R1	PIN, Cotter, 1/4 x 1-1/4" (2 used).
3	PO 1 818	BEARING, feed shaft.
5	513 999 R1	BRACKET, hopper.
	15 041 R11	BOLT, carriage, 1/2-13NC x 1-1/2", w/NUT (2 used).
6	513 998 R1	PINION, drive (13 teeth).
Q	3 514	PIN, std-hd., 1/4 x 1-9/16".
	13 034 R1	PIN, cotter, 1/8 x 5/8".
7	109 350	FITTING, lubrication, 87-1/2° elbow, 1/8".
8	510 943 R1	SPROCKET, feed shaft (15 teeth).
Q	3 514	PIN, std-hd., 1/4 x 1-9/16".
	13 034 R1	PIN, cotter, 1/8 x 5/8".
9	PO 7	SPRING, chain tightener arm (4-1/8" long, 3/4" O.D., 47-1/2 coils).
	23 946 A	CHAIN, drive, hopper (57 links, No. 32 chain) (Cub-53-C).
10	PO 19 151	CHAIN, drive, hopper (38 links, No. 32 chain) (Cub-53-A, Cub-53-B and Cub-54-A).
11	514 008 R91	ARM, tightener, chain (welded assembly) (2 used).
	13 068 R1	PIN, cotter, 3/16 x 1" (2 used).
12	PO 2 859	SPROCKET, idler, hopper drive chain (5 teeth).
13	514 005 R91	BRACKET, chain tightener arm (welded assembly).

## STANDARD ADJUSTING CLAMP AND CAPS (Cub-53-A Fertilizer Attachment for Cub-172 Runner Planter)

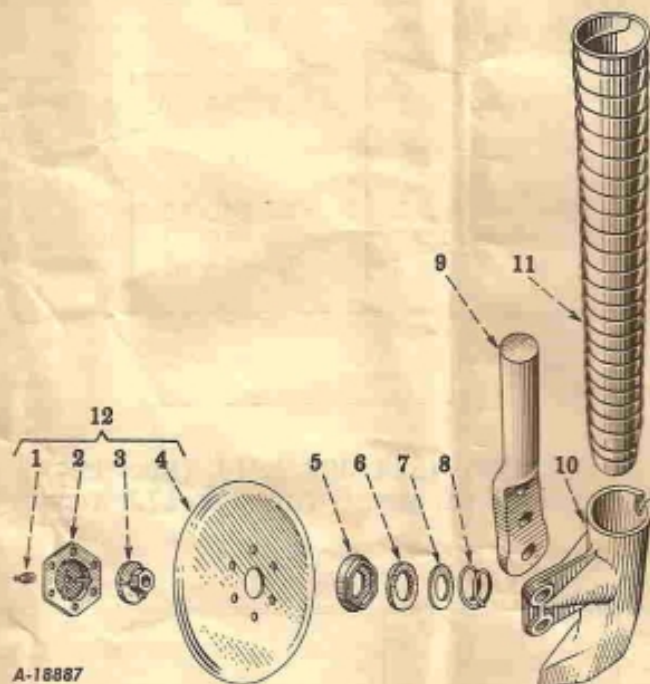


A-18886

Ref. No.	Part Number	Description
1	512 368 R1	CLAMP, adjusting, fertilizer spout standard (also used w/deep applicator standard).
2	510 918 R1	CAP, standard adjusting clamp, inside.
	13 380 R11	BOLT, machine, 5/8-11NC x 2-1/2", w/NUT (2 used).
3	28 256 B	CAP, standard adjusting clamp, outside.
	13 454 R11	BOLT, machine, 5/8-11NC x 3-1/2", w/NUT (2 used).



**DISK OPENER AND DELIVERY TUBE**  
**(Cub-53-A Fertilizer Attachment for Cub-172 Runner Planter)**

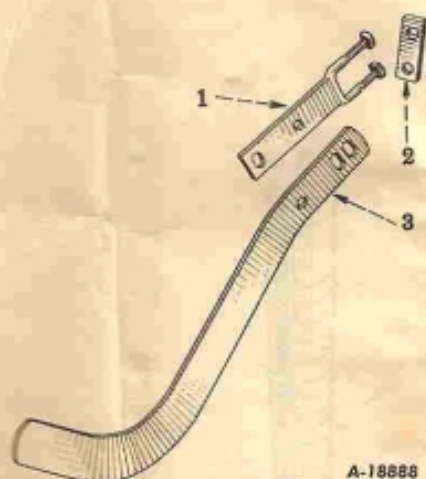


A-18887

Ref. No.	Part Number	Description
1	119 512	FITTING, lubrication, straight, 1/8".
2	511 870 R1	BEARING, disk.
3	511 869 R1	BLOCK, bearing.
	179 887	SCREW, cap, hex-hd., 1/2-13NC x 1-3/4".
	114 774	NUT, hex., 1/2-13NC.
	103 329	WASHER, lock, 1/2".
4	511 035 R1	DISK, opener (13" dia.).
	104 082	RIVET, rd-hd., 1/4 x 5/8" (6 used).
5	511 871 R1	WASHER, dust.
6	13 965 A	WASHER, felt, disk bearing (1-3/8" I.D. x 1-7/8" O.D. x 3/16" thick).
7	511 873 R1	WASHER, compression, felt washer.
8	PO 152	SPRING, disk bearing (1" long, 1-3/4" O.D., 2 coils).
9	512 369 R1	STANDARD, spout.
	13 293 R11	BOLT, machine, 1/2-13NC x 1-1/2", w/NUT (2 used).
	103 323	WASHER, lock, 1/2" (2 used).
10	512 378 R1	SPOUT, fertilizer.
11	PO 28 479	TUBE, fertilizer (29" long).
	15 007 R11	BOLT, carriage, 5/16-18NC x 1", w/NUT.
	103 128	NUT, wing, 5/16-18NC.
	Q 397	WASHER, plain, 11/32" I.D. x 3/4" O.D. x 16 ga.
12	511 035 R11	DISK, opener, assembly.

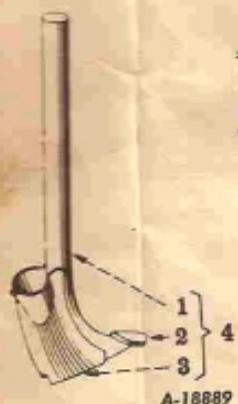


# COVERING BLADE (Cub-53-A Fertilizer Attachment for Cub-172 Runner Planter)



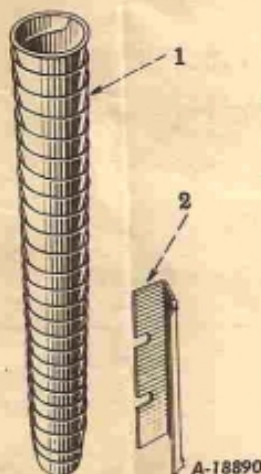
Ref. No.	Part Number	Description
1	512 359 R91	BRACKET, covering blade (welded assembly).
	105 606	NUT, square, 3/8-16NC (2 used).
2	512 360 R1	CLIP, covering blade.
3	512 376 R1	BLADE, covering.
	13 255 R11	BOLT, machine, 3/8-16NC x 1", w/NUT (2 used).

## DEEP APPLICATOR ATTACHMENT (514 302 R91) (Special) (Cub-53-A Fertilizer Attachment for Cub-172 Runner Planter)



Ref. No.	Part Number	Description
1	514 296 R1	STANDARD.
2	PO 26 869	POINT, diamond.
	104 169	RIVET, ck-hd., 1/4 x 1".
	104 171	RIVET, ck-hd., 1/4 x 1-1/4".
	514 663 R91	SPOUT, fertilizer (welded assembly).
3	106 918	RIVET, wagon-box-hd., 5/16 x 1-1/4" (3 used).
	514 302 R91	STANDARD, w/DIAMOND POINT and fertilizer spout.

## DELIVERY TUBE AND GUARD (Cub-53-B Fertilizer Attachment for Cub-171 Blackland Planter)



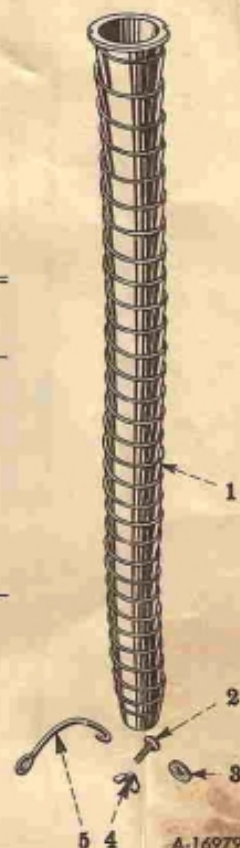
Ref. No.	Part Number	Description
1	PO 28 479	TUBE, fertilizer (29" long).
	15 007 R11	BOLT, carriage, 5/16-18NC x 1", w/NUT.
	103 128	NUT, wing, 5/16-18NC.
	Q 397	WASHER, plain, 11/32" I.D. x 3/4" O.D. x 16 ga.
	512 377 R1	GUARD, fertilizer tube.



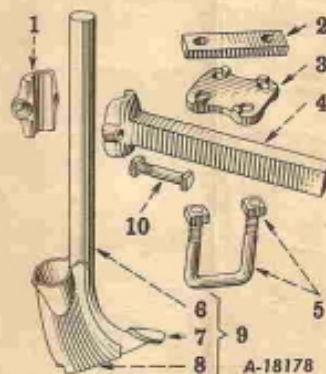
## DELIVERY TUBE

(Cub-53-C Fertilizer Attachment for Side Dressing with Cultivator)

Ref. No.	Part Number	Description
1	PO 28 479	TUBE, fertilizer (29" long).
2	15 007 R11	BOLT, carriage, 5/16-18NC x 1", w/NUT.
	103 128	NUT, wing, 5/16-18NC.
3	Q 397	WASHER, plain, 11/32" I.D. x 3/4" O.D. x 16 ga.
4	103 128	Follows Ref. No. 1.
5	PO 28 475	CONNECTION, ribbon tube.

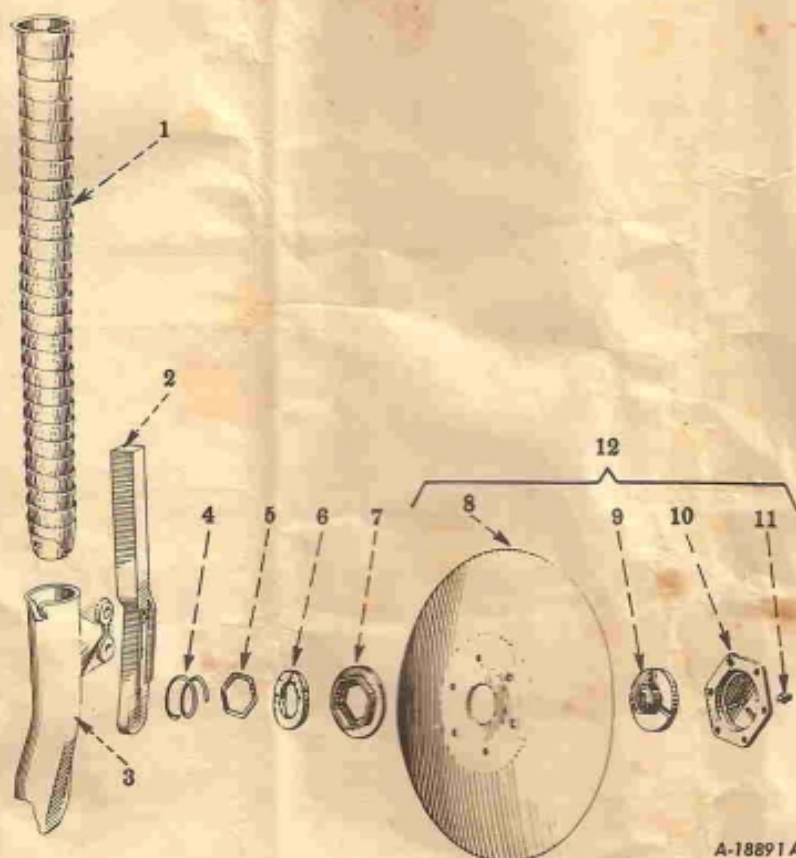
DEEP APPLICATOR ATTACHMENT (514 303 R91) (Special)  
(Cub-53-C Fertilizer Attachment for Side Dressing with Cultivator)

Ref. No.	Part Number	Description
1	1 779 BB	CAP, tool bar extension.
2	514 301 R1	CLIP, U-bolt.
3	514 299 R1	BLOCK, clamp.
4	29 603 BA	EXTENSION, tool bar.
	29 822 B	BOLT, machine, 1/2-13NC x 2-3/4", w/NUT (2 used) (heat treated).
	{514 300 R11	U-BOLT, clamp block, w/NUTS.
5	{514 300 R1	U-BOLT, clamp block (order U-BOLT, assembly, 514 300 R11).
	105 610	NUT, square, 5/8-11NC (2 used).
6	514 296 R1	STANDARD.
7	PO 26 869	POINT, diamond.
	104 169	RIVET, ck-hd., 1/4 x 1".
	104 171	RIVET, ck-hd., 1/4 x 1-1/4".
8	514 663 R91	SPOUT (welded assembly).
	106 918	RIVET, wagon-box-hd., 5/16 x 1-1/4" (2 used).
9	514 302 R91	STANDARD, w/POINT and SPOUT.
10	29 822 B	Follows Ref. No. 4.





# **DISK OPENER AND DELIVERY TUBE** (Cub-54-A Fertilizer Attachment for Cub-170 Planter)

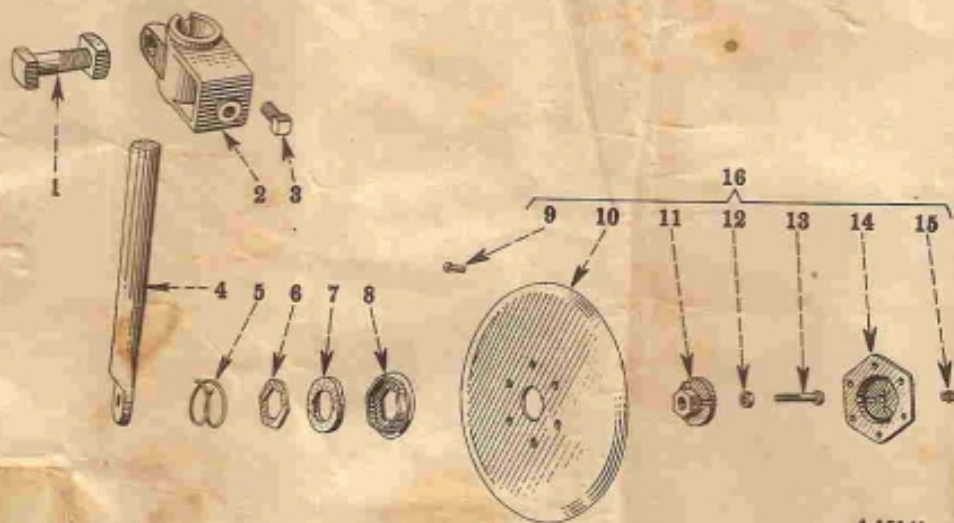


A-18891A

Ref. No.	Part Number	Description
1	PO 28 479	TUBE, ribbon, fertilizer.
	15 007 R11	BOLT, carriage, 5/16-18NC x 1", w/NUT.
	103 128	NUT, wing, 5/16-18NC.
	Q 397	WASHER, plain, 11/32" I.D. x 3/4" O.D. x 16 ga.
2	512 411 R1	STANDARD, disk.
	13 293 R11	BOLT, machine, 1/2-13NC x 1-1/2", w/NUT (2 used).
	103 323	WASHER, lock, 1/2" (2 used).
3	512 379 R1	SPOUT, fertilizer.
4	PO 152	SPRING, disk bearing (1" long, 1-3/4" O.D. 2 coils).
5	511 873 R1	WASHER, compression, felt washer.
6	13 965 A	WASHER, felt, disk bearing (1-3/8" I.D. x 1-7/8" O.D. x 3/16" thick).
7	511 871 R1	WASHER, dust.
8	511 035 R1	DISK, opener (13" dia.).
	104 082	RIVET, rd-hd., 1/4 x 5/8" (6 used).
9	511 869 R1	BLOCK, bearing.
	179 887	SCREW, cap, hex-hd., 1/2-13NC x 1-3/4".
	114 774	NUT, hex., 1/2-13NC.
	103 323	WASHER, lock, 1/2.
10	511 870 R1	BEARING, disk.
11	119 512	FITTING, lubrication, straight, 1/8".
12	511 035 R11	DISK, opener, assembly.



# No. 25 DISK COVERER (Cub-54-A Fertilizer Attachment for Cub-170 Planter)



A-15141

Ref. No.	Part Number	Description
1	13 361 R11	Follows Ref. No. 2.
2	PO 3 196	CLAMP, standard, w/SET SCREW.
3	13 361 R11	CLAMP, standard (order CLAMP, assembly, PO 3 196).
4	110 450	BOLT, machine, 5/8-11NC x 2-1/4", w/NUT.
5	512 578 R1	SCREW, set, sq-hd., cup-pt., 1/2-13NC x 1".
6	PO 152	STANDARD, disk.
7	512 582 R1	SPRING, disk bearing (1" long, 1-3/4" O.D., 2 coils).
8	M 34 585	WASHER, compression, felt washer.
9	512 581 R1	WASHER, felt (1-1/16" I.D. x 1-7/8" O.D. x 5/32" thick).
10	104 082	WASHER, dust.
11	PO 28 423	Follows Ref. No. 10.
12	104 082	DISK (9" dia.).
13	512 580 R1	RIVET, rd-hd., 1/4 x 5/8" (6 used).
14	13 002 R1	BLOCK, disk bearing.
15	179 845	NUT, hex., 3/8-16NC.
16	512 579 R1	SCREW, cap, hex-hd., 3/8-16NC x 1-3/4".
	119 512	BEARING, disk.
	512 583 R91	FITTING, lubrication, straight, 1/8".
		DISK, assembly.

## FERTILIZER DRIVE SPROCKET (Cub-53-A, Cub-53-B and Cub-54-A Fertilizer Attachments for Cub-170, Cub-171 and Cub-172 Planters)

Part Number	Description
B	SPROCKET, planter hopper feed shaft (12 teeth) (Used with Type "C" Duplex Hopper and Type "POAX" Cotton Hopper).
13 034 R1	SPROCKET, planter hopper feed shaft (9 teeth) (Used with Single Seed Hopper and Richmond Corn Hopper).
3 514	PIN, cotter, 1/8 x 5/8".
	PIN, std-hd., 1/4 x 1-9/16".



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